

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) An electrophoretic display comprising:
~~a drive unit and~~
~~at least one pixel cell that is arranged with having drive~~
~~electrodes and that contains an electrophoretic media that is~~
~~responsive to an electric field applied between said drive~~
~~electrodes; and~~
~~wherein said a drive unit is arranged to provide said at least~~
~~one pixel cell with a drive signal and is switchable between a~~
~~monochrome drive scheme and a grayscale drive scheme, said~~
~~monochrome drive scheme involving drive signals providing for only~~
~~two extreme optical pixel states, and said grayscale drive scheme~~
~~involving drive signals providing for said two extreme optical~~
~~pixel states and at least one additional, intermediate pixel state~~
~~between said two extreme optical pixel states, wherein said~~
~~grayscale drive scheme provides drive signals for said two extreme~~
~~optical states that are different than said monochrome drive scheme~~

for said two extreme optical states, and wherein said drive unit furthermore is operative to apply a separate-transition drive signal when switching from said grayscale drive scheme to said monochrome drive scheme, whereby said transition drive signal is being separate from signals applied during either of said monochrome drive scheme and said grayscale drive scheme and being arranged such that said transition drive signal counteracts to counteract the build-up of remnant DC voltage in the pixel cell.

2. (Previously presented) The electrophoretic display according to claim 1, comprising a number of pixel cells that are addressable in image frames, wherein said grayscale drive scheme is employed for image frames that include at least one intermediate pixel state and the monochrome drive scheme is employed for image frames that include extreme states only.

3. (Previously presented) The electrophoretic display according to claim 1, further comprising a memory unit wherein pre-defined drive signals corresponding to the respective drive schemes are stored accessible by the drive unit.

4. (Previously presented) The electrophoretic display according to claim 1, wherein said transition drive signal drives the pixel cell repeatedly to each of said two extreme optical pixel states so as to remove any remnant DC voltage in the pixel cell before the monochrome drive scheme is initiated.

5. (Previously presented) The electrophoretic display according to claim 1, wherein said transition drive signal is a drive signal in the grayscale drive scheme that corresponds to a one of the two extreme optical pixel states of the monochrome drive scheme that would have immediately followed said transition drive signal and that replaces the one of the two extreme optical pixel states of the monochrome drive scheme that would have immediately followed said transition drive signal.

6. (Previously presented) The electrophoretic display according to claim 1, wherein the transition drive signal is selected from a transition drive scheme that comprises more than one alternative transition drive signals.

7. (Previously presented) The electrophoretic display according to

claim 1, wherein the transition drive signal is applied when switching to said monochrome drive scheme only when switching from a subset of the pixel states provided for by said grayscale drive scheme that is less than all of the pixel states of said grayscale drive scheme, otherwise the transition drive signal is not applied.

8. (Previously presented) The electrophoretic display according to claim 7, wherein said subset of pixel states excludes said extreme pixel states.

9. (Previously presented) The electrophoretic display according to claim 1, wherein said transition drive signal is a drive signal that corresponds to a signal in the monochrome drive scheme that would have immediately followed said transition drive signal but modified with an additional remnant DC voltage reducing voltage pulse and that replaces the signal in the monochrome drive scheme that would have immediately followed said transition drive signal.

10. (Previously presented) The electrophoretic display according to claim 9, wherein said additional remnant DC voltage reducing voltage pulse is employed before said monochrome drive scheme drive

signal.

11. (Currently amended) A method for driving an electrophoretic display, said method comprising the steps of:

receiving image information regarding an image to be displayed;

selecting a drive scheme from a monochrome updating drive scheme and a grayscale updating drive scheme, depending on the existence of grayscales in the image to be displayed, wherein said monochrome drive scheme includes drive signals providing for only two extreme optical pixel states, and said grayscale drive scheme includes drive signals providing for said two extreme optical pixel states and at least one additional, intermediate pixel state between said two extreme optical pixel states, wherein said grayscale drive scheme provides drive signals for said two extreme optical states that are different than said monochrome drive scheme for said two extreme optical states;

employing a transition signal in case the drive scheme is changed from the grayscale drive scheme to the monochrome drive scheme, said transition signal being separate from signals applied during either of said monochrome drive scheme and said grayscale

drive scheme and being such that any remnant DC voltage is reduced;
employing a drive signal that is based on the selected drive
scheme and that corresponds to said image to be displayed.